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REPORT OF THE SECOND MEETING

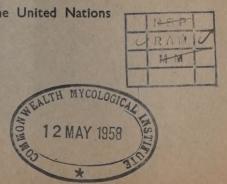
OF THE PLANT PROTECTION COMMITTEE

FOR THE SOUTH EAST ASIA AND PACIFIC REGION



Held in Kandy, Ceylon 2-7 December 1957

Food and Agriculture Organization of the United Nations



Beginning in January 1955, reports of FAO Meetings held as part of the Program of Work of the Agriculture Division are being issued in the present form.

Reports are numbered chronologically within each calendar year.

An earlier report relating to the Plant Protection Agreement for the South East Asia and Pacific Region has been issued under the following title:

Report of the Plant Protection Meeting for the South East Asia and Pacific Region, Singapore, 13-17 December 1954.

The first Meeting of the Plant Protection Committee for the South East Asia and Pacific Region was held in Bangkok, Thailand, 3-7 December 1956.

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# THE PLANT PROTECTION COMMITTEE FOR THE SOUTH EAST ASIA AND PACIFIC REGION

held in Kandy, Ceylon

from

2 to 7 December 1957

Food and Agriculture Organization of the United Nations
January 1958 Rome, Italy

Transportation

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#### INTRODUCTION

The Plant Protection Committee was established in pursuance of the Plant Protection Agreement for the South East Asia and Pacific Region, which was approved by the Council of the Food and Agriculture Organization of the United Nations in November 1955. The Committee, on which all governments contracting to the Agreement are represented, serves as an advisory body to the participating governments on matters relating to the implementation of the Agreement and on other problems requiring regional cooperation in the field of plant protection. At its first meeting held in Bangkok 3-7 December 1956, the Committee, in view of the need for establishing at its initial stage a sound program to strengthen inter-country collaboration, recommended to the Director-General of FAO that a second meeting be convened the following year in order to consider the many pressing problems requiring attention.

The second meeting of the Plant Protection Committee was therefore held, through the courtesy of the Government of Ceylon, at Kandy from 2 to 7 December 1957. The meeting was attended by representatives of twelve governments. The South Pacific Commission was also represented by an observer. Five general sessions and four sub-committee sessions were held. Excursions were arranged by the Department of Agriculture of Ceylon to visit the research laboratories of the Department and Botanic Gardens at Peradeniya, Kundasale and Pallekelly Cacao Estates, Maha-Illuppallama dry zone, and the Fumigatorium in Colombo.

At the opening session of the Meeting, Dr. M.F. Chandraratne, Director of Agriculture of Ceylon, who deputised for the Hon. Mr. D.P.R. Gunawardena, the Minister of Agriculture and Food, welcomed the delegates, observers and FAO officials. He regarded it historically appropriate that Ceylon should function as host to the Plant Protection Committee because it was the epidemic of leaf rust which devastated the thriving coffee industry of Coylon in the eighteen eighties that inaugurated the applied science of plant pathology. Since then, a diversity of pests and diseases ravaged Ceylon's plantation crops but the entomologists and pathologists successfully met the challenges. To illustrate the triumph of man over the microbe, Dr. Chandraratne cited the prompt development of copper formulations by the Pathologist of the Tea Research Institute for the effective control of blister blight within a short period of its appearance in Ceylon. referred to the discovery of a strain of the swollen shoot virus in cacao this year, but it was hoped that the "cordon sanitaire" promptly placed by the Department of Agriculture around the foci of infection would confine the virus and eradication could be achieved. the tristeza disease of citrus was also identified in the Bibile area and successful control was being achieved by the use of suitable stockscion combination. Dr. Chandraratne conceded that the diseases of village crops had, in the past, received scant attention, but the recent

shift of emphasis could be illustrated by the elaborate program for the control of rice blast and the crop insurance scheme launched by the Commissioner for Agrarian Services to secure the villager against disease hazards. As the prevention of entry of pests and diseases into the South East Asian countries is the chief concern of this Committee, Dr. Chandraratne commended to delegates a visit to the well-equipped quarantine and fumigation facilities that the Department of Agriculture maintains in Colombo. He was sure that the efficiency of Ceylon's quarantine enforcement would impress the delegates. In conclusion he wished the deliberations of the Committee success and the stay of delegates and observers in Ceylon pleasant and profitable.

Dr. F.F. Lininger, FAO Country Representative in Ceylon, then addressed the meeting on behalf of the Director-General of FAO. He thanked the Government of Ceylon for its courtesy in acting as the host of the meeting and in providing excellent facilities through the offices of its Department of Agriculture. He also welcomed the representatives of governments. In stressing the importance of the functions of the Plant Protection Committee, he referred to the statement made by the Director-General at the last session of FAO Conference held in November 1957, in which the value of regional approach in solving plant protection problems was re-affirmed. The Director-General expressed the hope that this Committee, through its achievements and progress, would develop gradually into a permanent regional organization, comparable to those now operating in Europe and the Mediterranean, in Central America, Panama and Mexico, and in Africa south of the Sahara.

On behalf of the delegates and observers, Dr. T.H. Harrison, the Chairman of the Committee, briefly thanked the Director of Agriculture of Ceylon and the FAO Representative for their respective parts in the opening proceedings. He stated that the presence of representatives of twelve countries at the meeting reflected the growing appreciation of the importance of cooperative plant quarantine undertaking as a decisive factor in preventing losses from plant diseases, pests and weeds. He expressed the view that such cooperation was making a positive contribution to the well being of the peoples in the Region.

#### PARTICIPATION IN THE MEETING

#### Delegations and Observers

#### Australia

T.H. HARRISON (Delegate), Director of Plant Quarantine
Department of Health, Canberra, A.C.T.

#### Burma

KAUNG ZAN (Observer), Assistant Research Officer (Plant Pathology), Agricultural Research Institute, Gyogon, Rangoon

#### Ceylon

J.W.L. PEIRIS (Delegate), Plant Pathologist,
Department of Agriculture, Peradeniya

H.E. FERNANDO (Alternate), Entomologist,
Department of Agriculture, Peradeniya

D.V.W. ABEYGUNAWARDENA, Assistant Plant Pathologist,
Department of Agriculture, Peradeniya

M.P. DE PINTO, Inspector, Colombo Fumigatorium, Colombo

## Federation of Malaya

ANTHONY JOHNSTON (Delegate), Senior Plant Pathologist,
Department of Agriculture, Kuala Lumpur

KAMARDIN BIN BAHAR (Alternate), Assistant Research Officer,
Department of Agriculture, Kuala Lumpur

## France

GILBERT BOURIQUET (Delegate), Chief, Plant Protection Service
Ministry of French Overseas Territories
Centre technique d'Agriculture tropicale,
Nogent sur Marne (Seine), France

#### India

K.B. LAL (Delegate).

Plant Protection Adviser to the Government of India, Directorate of Plant Protection, Quarantine and Storage, 4/19 Ajmeri Gate Extension, New Delhi

#### Indonesia

SOEPARTONO SISWOPRANOTO (Observer), Acting Head, Institute for Diseases and Pests, 40, Bubulak, Bogor

#### Netherlands

H.W. MOLL (Delegate),

Head, Subdivision Agricultural Research Proefstation Kota Nica, Hollandia Binnen, Netherlands New Guinea

#### Thailand

KAHN JALAVICHARANA (Delegate), Chief of Plant Industry Division
Department of Agriculture, Bangkok

SAKSIRI KIRTPREDI (Alternate), Chief Plant Quarantine Officer Department of Agriculture, Bangkok

## United Kingdom

K.A. EAST (Delegate),

First Secretary, Office of the High Commissioner for United Kingdom in Ceylon, Colombo

## United States of America

O.D. DEPUTY (Observer),

Plant Quarantine Specialist International Cooperation Administration, Washington, D.C.

## Vietnam

NGUYEN-VAN-DAN (Delegate), Chief, Entomology Division Ministry of Agriculture, Saigon

#### South Pacific Commission

T.H. HARRISON (Observer), Director of Plant Quarantine
Department of Health, Canberra A.C.T.,
Australia

#### FAO Staff

F.F. LININGER FAO Country Representative in Ceylon,

Colombo, Ceylon

L. LING Plant Pathologist, Plant Production

Branch, Agriculture Division, FAO,

Rome, Italy

W. STAHL Plant Protection Officer, FAO Regional

Office, Bangkok, Thailand

Interpreters

MRS. LYDIA KERR ILO, Geneva, Switzerland

A. SIFRE Geneva, Switzerland

#### Officers of the Meeting

T.H. Harrison, Chairman of the Committee, presided over all the general sessions of the meeting. L. Ling of FAO served as technical secretary.

A Drafting Sub-Committee and two technical sub-committees were designated by the Chairman, consisting of the following members:

Drafting Sub-Committee: J.W.L. Peiris (Chairman),
A. Johnston, K.B. Lal

Sub-Committee to consider regulatory measures:

K.B. Lal (Chairman), Kamardin Bin Bahar,

M.P. De Pinto, T.H. Harrison, Kaung Zan,

Saksiri Kirtpredi. H.W. Moll

Sub-Committee to consider Appendix A of this Agreements

A. Johnston (Chairman), D.V.W. Abeygunnwardena, G. Bouriquet, O.D. Deputy,
H.E. Fernando, Kahn Jalavicharana,
Soepartone Siswopranoto, Nguyan-Van-Dam

#### Apologies

The Governments of Cambodia, New Zealand, and Pakistan expressed their regret at being unable to send representatives to the meeting.

#### Acknowledgement

FAO gratefully acknowledges the courtesy extended by the Government of Ceylon, and the assistance provided by the many officials of the Ministry of Agriculture, especially Mr. A.V. Richards, Dr. J.W.L. Peiris and other members of the local reception committee.

#### CURRENT STATUS OF THE PLANT PROTECTION AGREEMENT

Since the first meeting of the regional Plant Protection Committee held in December 1956, the Plant Protection Agreement for the South East Asia and Pacific Region has been ratified by two signatory governments, namely, the Netherlands and Portugal, and it has also been adhered to by three additional governments, namely, France, the Federation of Malaya and Pakistan. The current status of the Agreement is therefore as follows:

| Country                | Date of Signature           | Date of Ratification | Date of Adherence |
|------------------------|-----------------------------|----------------------|-------------------|
| Australia              | 27 Feb. 1956                | Not required         |                   |
| Ceylon *United Kingdom | 27 Feb. 1956                | Not required         |                   |
| *Laos                  | 29 Mar. 1956<br>25 May 1956 | 3 Dec. 1956          |                   |
| *Netherlands           | 25 June 1956                | 19 July 1957         |                   |
| *Indonesia             | 28 June 1956                |                      |                   |
| Portugal               | 2 July 1956                 | 5 Sept, 1957         |                   |
| Vietnam                | 2 July 1956                 | Not required         |                   |
| India                  | 2 July 1956                 | Not required         |                   |
| Thailand               | -                           | ,inc                 | 26 Nov. 1956      |
| France                 | - in                        | diss                 | 20 Aug. 1957      |
| Malaya                 | 4                           | -                    | 20 Nov. 1957      |
| Pakistan               | -                           | -                    | 8 Jan. 1958       |

<sup>\*</sup> Signatures subject to ratification

The Agreement entered into force on 2 July 1956 in accordance with the provisions of Article XI.

At the time of the second meeting of the Committee the following ten governments have become parties to the Agreement: Australia, Ceylon, France, India, Federation of Malaya, the Netherlands, Portugal, Thailand, United Kingdom, Vietnam. In addition, the Government of Pakistan deposited its instrument of adherence shortly after the meeting.

#### PLANT QUARANTINE ACTIVITIES OF PARTICIPATING GOVERNMENTS

At the first meeting of the Committee, representatives of participating governments reported on the plant quarantine activities in their respective countries or territories, with special reference to the organizational aspects, facilities available and legislative provisions. Summaries of those statements were included in the Report of the First Meeting of the Plant Protection Committee, issued in January 1957.

At the present meeting, government representatives were invited to report on the advances and major changes which had been introduced in plant quarantine during the last year and on activities which were not covered in the last meeting. Many participating governments also submitted lists of plant diseases, insect pests and noxious weeds which have been known to occur in their territories (Annex B).

#### Australia

Territory of Papua and New Guinea. At the first meeting of the Committee it was reported that the Administration of the Territory of Papua and New Guinea had promulgated the Quarantine Ordinance 1953 and the Quarantine (Plants) Regulations 1956, which give full powers to implement the quarantine aspects of the regional Plant Protection Agreement. Since then Notices under the Ordinance have been prepared listing specific prohibitions and restrictions. These Notices implement fully the quarantine requirements of the Agreement and all the recommendations of the first Committee meeting, except that relating to citrus. The importation of certified citrus trees is still permitted only from Australia. The recommendation of the Committee that vegetative material from anywhere outside the Region should not be imported will be implemented in the near future whon stocks of certified citrus material have been built up locally.

The Administration is working on the preparation of carefully collated check lists of the pests and diseases in the Territory. Lists published previously contained some records which were not fully confirmed but the surveys in progress should result in the compilation of fully checked lists. Although surveys of this type can never be complete, the pests and diseases which are of current importance should become well known when all districts have been covered systematically.

No weeds have been declared noxious under the new Plant Disease and Control Ordinance 1953, which is the legislation appropriate to the declaration of noxious weeds. The declaration of noxious weeds was being considered by the Administration but one of the difficulties was that there would be little point in declaring weeds unless it was practicable for the land users to take measures leading to their control and for the authority to enforce such measures.

#### Burma

Organization. Plant quarantine work in Burma is carried out by the Department of Agriculture, in collaboration with the Department of Customs. The Chief Research Officer of the Department of Agriculture is the head of the plant quarantine service.

All incoming plant material requires appropriate health certificate from the country of origin. Customs offices at Rangoon sea port and Mingaladen air port undertake to check the health certificate accompanying plant materials seeking entry. Any consignment without a proper certificate is taken over by the Customs and forwarded to the Plant Quarantine Laboratory at the Agricultural Research Institute, Gyogon, Rangoon. The consignment is then inspected and may be fumigated or otherwise treated prior to release or destroyed if such action is warranted. The plant quarantine service also provides health certificates for all plant materials intended for export, after being inspected and if necessary treated at the Plant Quarantine Laboratory.

Facilities. Customs offices and the Agricultural Research Institute are equipped with a small fumigation chamber at each centre for small consignments. For larger consignments, fumigation has to be done by commercial concerns, following the method approved by the head of the plant quarantine service and under the supervision of a senior official of the service.

At present the plant quarantine service has no special station where imported plants may be grown in quarantine. However, the Department of Agriculture has many suitable plots of land at its disposal and any plant material which requires post-entry quarantine can be grown under the supervision of a crop specialist in an isolated plot, where the plant pathologist or entomologist can visit as often as required.

Legislation. Up to 1944, plant quarantine activities were governed by the Insects and Posts Act (India II, 1914). Since then this Act has been amended from time to time. At present the plant quarantine service is guided by the regulations contained in Notification No. 406 of the Insects and Posts Act, with one exception, i.e., the import of any plant material by air into Burma has been permitted, provided it satisfies all other requirements.

The Government of the Union of Burma realizes that its plant quarantine organization is still inadequate with regards to facilities, personnel and legislation. Steps are now being taken to set up a more efficient quarantine system. The Government would be glad to consider amendment of the existing Insects and Pests Act in order to conform with the recommendations of the Plant Protection Committee and hopes that a plant quarantine training center can be organized by FAO.

#### Ceylon

Various articles of the regional Plant Protection Agreement have been examined with a view of their implementation under the existing technical set-up and legislative enactments in Ceylon. In general, the present organisation and legislation fairly fulfil the requirements. However, some revision and elaboration of the regulations and a reorganisation of the technical set-up with an increase of staff for enforcement are needed.

Article III of the Agreement with respect to measures regarding the importation of plants from outside the Region can be implemented to a great extent under the existing legislative enactments. All plant materials imported into Ceylon is conveyed by Customs authorities to the Inspector of the Colombo Fumigatorium who examines the plants together with the accompanying phytosanitary certificate to ascertain whether all the legal requirements have been met before releasing the plants to the consignee. In regard to the prevention of the entry of pests and diseases mentioned in Appendix A of the Agreement, the following may be stated:

- (a) Coconut plants, importation is prohibited.
- (b) Sugar cane sets, importation is prohibited except by the Director of Agriculture.
- (c) The following plants may not be imported except under a written permit from the Director of Agriculture:
  - (i) Cacao plants, pod, or seed (except cured seed).
  - (ii) Citrus plants permit is issued only if the exporting country is free from virus diseases.
  - (iii) Cotton seed or unginned cotton from Western Hemisphere.
  - (iv) Sweet potato from Africa.
- (d) All fresh fruit may be imported only under a license and in accordance with conditions given therein, in order to prevent the entry of the Mediterranean fruit fly.
- (e) Coffee, maize, oil palm, potato, rice and sweet potato from areas other than Africa are not restricted by legislation, but the incorporation of these crops into legislation will be made shortly.

Article TV of the Agreement concerning measures to exclude South American leaf blight can be adequately enforced under the existing legislation. The importation of hevea rubber plants is absolutely prohibited if originating from American tropics and is restricted if coming from other areas.

Article V of the Agreement with respect to measures regarding movement of plants within the Region can be also fully enforced by the existing legislation.

The phytosanitary certificates issued by Ceylon has been brought up fully in conformity with the requirements of the International Plant Protection Convention.

During the past year technical personnel from other countries unaware of the plant protection regulations of Ceylon brought in sweet potato tubers from Japan and pineapple suckers from South America. Those consignments were destroyed. Further in pursuance of the objectives of the regional Plant Protection Agreement, a request for cacao planting material from Burma was refused.

#### Federation of Malaya

No change has taken place during the past year in the legislative provisions for the control of the importation of plants or in the organisation for implementing this control. All importations of plants, as previously, have to be covered by an import license, which is issued in accordance with the provisions of the Agreement and the recommendations of the Committee.

Draft importation regulations which it is hoped to introduce in the future incorporate the requirements of the Agreement and provide for strict control of the crops specified in the Report of the First Meeting of the Committee under the heading of "Measures for regulating importation and movements of plants".

Importation by air. According to the conditions under which import licenses for plants imported by air are issued, all such plants must be addressed to the Director of Agriculture in Kuala Lumpur, where plant pathologists and entomologists are stationed. In this way all importations by air can be carefully examined immediately on arrival. The only exceptions are seeds of ornamental plants or vegetables imported in small packets from seed merchants in temperate countries.

List of pests and diseases. A list of plant diseases by
A. Thompson and A. Johnston, entitled "A host list of plant diseases
in Malaya" (Commonw. Mycol. Inst. Mycological Papers 52) was published
in 1953. A supplement which lists diseases recorded since 1950 is
being prepared and approaching completion.

"A preliminary list of food-plants of some Malayan insects" (Dept. Agri. Bull. 38) by B.A.R. Gater was published in 1926. A supplement was added by N.C.E. Miller in 1932. A revised list is at present in preparation but is unlikely to be completed for some time due to shortage of staff.

#### France

New Caledonia. The phytosanitary regulations in force in New Caledonia are based on the Law of 26 November 1952 concerning plant protection in the territories under the jurisdiction of the Ministry of French Overseas Territories. The law is supplemented by the "Reglement d'Administration Publique" issued on 13 September As concerns legislation specifically applicable to New Caledonia, there are the Territorial Decree of 30 June 1948 which provides for the establishment of a Comité des Epiphyties". and six principal Territorial Regulations concerning plant protection issued between 12 August 1948 and 30 March 1957. Among these regulations, the Territorial Regulation of 12 August 1948, which deals with the importation and exportation of plants, provides that any plant material intended for importation must be accompanied by a certificate of health and origin, and that incoming materials must be inspected within three days after their arrival and outgoing materials within three days before shipment. Plants may be imported only through the port of Noumea, where fumigation can be carried out in a vacuum fumigation unit with a capacity of 5 cubic meters.

Investigations on diseases and pests of cultivated plants are carried out at the "Institut Français d'Océanie", under the supervision of the Plant Pathologist, F. Bugnicourt. A list of diseases of cultivated plant in New Caledonia was published in 1951 and has since been supplemented. A list of animal parasites, under the title of "Parasites animaux des plantes cultivées en Nouvelle-Calédonie et dépendances" by F. Cohic, was published by the Institute in 1956.

#### India

Plant quarantine measures are undertaken and enforced in India in accordance with the Destructive Insects and Pests Act of 1914, under which various Government notifications, prohibiting or restricting the import of plants or plant produce, are issued. Plant materials to be imported are inspected at the ports of entry and if necessary treated. A phytosanitary certificate in a prescribed form is usually required to accompany each plant consignment. There are certain restrictions on the import of some plants, such as <u>Citrus</u> spp., sugar cane, potato, coffee, rubber, cacao and <u>Allium</u> spp., and seeds of cotton, flax, berseem and sunflower and Mexican jumping bean, unginned cotton and unmanufactured tobacco.

Since the submission of the report at the first meeting of the Committee more facilities have been created or are being planned at the following sea and air ports:

- (1) Cochin seaport, Kerala State. The Fumigation Station established in 1955 at Cochin seaport has now been developed into a Plant Quarantine Station, staffed with an entomologist, a plant pathologist and other technical personnel. A site for the construction of a laboratory, a fumigation hall and an inspection room has been acquired and the construction may start in 1958.
- (2) Calcutta seaport. A Plant Quarantine Station has started functioning with full complement of staff and equipment as at Madras seaport. The construction of a laboratory, a fumigation hall and an inspection room will begin shortly. Meanwhile, a big hall near the docks has been made available for work.
- (3) Vishakapatnam seaport. The Plant Quarantine Station at this seaport is now functioning with full complement of staff as at Madras seaport. The construction of the necessary buildings are being planned.
- (4) Madras and Bombay scaports. An insect-proof diseased plant segregation house is nearing completion at the Plant Quarantine Station at Madras scaport and a similar house is to be built shortly at the Plant Quarantine Station at the Bombay scaport.
- (5) Airports. Plant Quarantine Stations have started functioning at the airports of Bombay, Calcutta, New Delhi and Madras and the necessary staff for each has been appointed. Separate buildings are planned for each of the airports and at meantime the inspection and treatment of incoming plant materials are being carried out in the accommodations provided temporarily by the airport authorities.

In addition to the above-mentioned, Plant Quarantine Stations at the seaports of Bombay and Madras, and the Plant Fumigation Station at the airport of Amritsar (Punjab) continue to function.

#### Indonesia

As mentioned at the first meeting of the Committee, the U.S. International Cooperation Administration, in order to assist in meeting the need for more trained personnel, has organized since 1954 plant quarantine courses in the Institute for Plant Diseases and Pests at Bogor, Java. At present, there are 22 trained persons to staff the 21 ports of entry. In 1956 two of the plant quarantine inspectors visited the United States for 6 months to attend the plant quarantine training course organized by the U.S. Department of Agriculture at New York,

In December 1957 eight more inspectors would go to the United States for the same purpose. When they complete their studies and return to Indonesia, the plant quarantine service will be able to staff most of the ports which are operated now by the staff of the Extension Service, Forestry Service and the Public Health Service.

Fumigation and inspection facilities have been improved during the last four years. The capacity of fumigation chambers is at present 304 cubic meters in comparison with 223 cubic meters in 1954.

The plant quarantine regulations are being revised in order to conform with the International Plant Protection Convention and the regional Plant Protection Agreement.

#### Netherlands

Netherlands New Guinea. Improvement of plant quarantine facilities within the ability and in accordance with the need of the Territory is being pursued by establishing a new plant quarantine station in Hollandia, the principal port of entry. For this purpose, a plot with a suitable building has been acquired. This new station, where all facilities for treatment, fumigation, post-entry quarantine and incineration will be available, is expected to be put into use in the middle of 1958.

To implement fully the requirements of the regional Plant Protection Agreement, not only the plant quarantine decree needs amending, but the general Ordinance, on which the decree is based, has to be adapted to modern developments in plant protection. The Section of Entomological and Phytopathological Research is preparing new plant quarantine regulations in close cooperation with legal experts. In the meantime measures to protect the hevea rubber industry specified in Appendix B of the Agreement and the Committee's recommendations concerning measures for regulating the importation of plants from outside the Region can be enforced under the existing regulations. Decree of the Director of the Department of Economic and Technical Affairs No. 1-Alg-53-3 issued on 8 January 1953, provides in Article VI B, Section 5 that: "The expert shall be entitled to seize or detain in quarantine any shipment of plant material, either accompanied with a certificate or not, and irrespective of its state of health, on account of the consideration that the shipment may endanger the agriculture in Netherlands New Guinea."

## Thailand

Plant quarantine activities remained same as reported at the first meeting of the Committee. The Plant Diseases and Pests Quarantine Act  $B.E.\ 2495\ (1952)$  and the relevant ministerial regulations are being

revised to make them more in conformity with the International Plant Protection Convention and the regional Plant Protection Agreement. Following the modifications introduced by the first meeting of the Committee in the list of destructive pests and diseases not yet established in the Region (Appendix A of the Agreement), control of additional species of plants would be included in the new ministrial regulations.

In connection with the training program, one plant inspector was sent, through the co-operation of the U.S. International Cooperation Administration, to the United States in 1957 for training in plant quarantine. Another plant quarantine officer will receive the same training in 1958. It is hoped that in the future, with the aid of FAO, our trainees could be sent to countries which are members to the Agreement to study and observe the plant quarantine administration and procedures, in order to achieve better co-operation and mutual understanding.

#### United Kingdom

British Solomon Islands. Inspection of plant produce to be imported is carried out at ports of Honiara, Yandina and Gizo, where inspectors are stationed. An entomologist is available for identification of insects, but there are no fumigation facilities.

Cap. 54 of the Revised Laws of the British Solomon Islands Protectorate and subsidiary legislation provide regulations for the control of plant importation. The importation of plants gazetted as noxious weeds and of earth, soil, sand, ashes etc. liable to contain weed seed, pests or plant diseases is prohibited. The High Commissioner may also, by proclamation, prohibit the importation of specified plants or of plants in general from any specified place. An import permit must be obtained in advance for the importation of any plants and each consignment must be accompanied by a phytosanitary certificate issued by the producing or exporting country.

North Borneo. Control over the importation of plants and planting material is exercised through the Plant Importation Rules, 1938, the Prohibited Plant Rules, 1940, and the Control of Hemp Rules, 1947, made under the Agricultural Pests Ordinance (Cap. 4). The Director of Agriculture is responsible for the enforcement of these rules.

Living plants and other planting material may be imported only through Jesselton and Sandakan, where there are facilities for inspection, fumigation and disinfection. Suitable post-entry quarantine facilities exist, however, only at Jesselton. The establishment of more satisfactory post-entry quarantine facilities at both ports have been under consideration.

All living plants and planting materials to be imported are required to be accompanied by a valid certificate of freedom from pests and diseases issued by a competent authority in the country of origin. In the case of plants which have been declared as "scheduled plants", a permit must be first obtained from the Director of Agriculture or his deputy.

The introduction of <u>Musa</u> spp., certain weeds and mistletoes is prohibited.

Sarawak. Due to the fact that it has not yet been possible for the Directors of Agriculture, Sarawak, and North Borneo, to meet and prepare joint proposals for emandation of existing legislation, there has been no change in the situation outlined in the report submitted by the Sarawak Government to the first meeting of the Committee. The problem is complicated in that there are three territories involved (Sarawak, North Borneo, and Brunei) and two entry ports by air (Kuching and Labuan), at neither of which are plant quarantine or adequate plant inspection facilities available.

A tentative list of the more important plant pests and diseases was presented at the meeting but it was emphasised that there was no entomologist in Sarawak and that the only plant pathologists working in this territory were engaged on the special problem of pepper disease and have only been there since late 1955. Of these pests and diseases the only really serious one at present is the foot rot of pepper, caused by Phytophthora hibernalis; although widespread losses occur from rice bugs and stem borers at times.

#### Vietnam

There has been no significant progress made in plant quarantine since the first meeting of the Committee and the shortage of technical personnel as well as the lack of funds has prevented the establishment of fumigation centers recommended by the Committee. However, new stations have been established during the past year along the Vietnam-Cambodia and Vietnam-Laos borders for phytosanitary control and inspection of incoming plants and plant products. Inspection of imported plant materials is also enforced in Saigon. Furthermore, a preliminary list of insect pests and diseases affecting cultivated plants and noxious weeds in Vietnam has been prepared.

## MEASURES FOR REGULATING IMPORTATION AND MOVEMENTS OF PLANTS

The Committee examined the report of the Sub-Committee designated to consider regulatory measures and approved it in general. While detailed quarantine procedures for the control of plants moving in international traffic would have to be formulated by individual governments in accordance with their practices and resources, the Committee recommends that every endeavour be made by participating governments to observe the precautions given below in respect of the crops mentioned.

## Periew of Recommendations of the First Meeting

After having reviewed the recommendations made by the Committee at its first meeting with regard to the movement of cacao, sugar cane, coffee, sweet potato, potato, citrus, and cotton into or within the Region, and having considered a suggestion relating to the Oidium disease of rubber, the following modifications or additional precautionary measures were recommended, in the light of information obtained during the past year.

Rubber. All budwood and other propagating material of hevea rubber moving from one territory to another within the Region should be dusted with sulphur before shipment and the budwood should be dipped in a mercuric chloride solution for a brief period immediately before use to eliminate Oidium heveae, because of the possibility of physiologic races of the organism existing or developing in different areas of the Region. A solution suitable for this purpose consists of 0.2 percent mercuric chloride in 50 percent methyl alcohol. Immediately after dipping the budwood should be washed thoroughly in running water.

Cacao. The swollen shoot disease having been recently confirmed to exist in Ceylon, the known distribution of this disease given in paragraph 3 of Annex B to the Report of the First Meeting of the Plant Protection Committee should be altered to include Ceylon, in addition to Wast Africa. The meeting considered but could not accept a suggestion that restrictions in respect of the movement of cacao seed should be relaxed. The virus is known to exist in the testa and therefore pending positive evidence of a satisfactory method of seed treatment against this virus, relaxations could not be justified.

Sugar came. Since certain insect pests have not been found to be widely distributed in the Region, the distribution of sugar came sets within the Region should be permitted only with due regard to the freedom of the sets from insect pests as well as from diseases.

Coffee. With the exception of a limited amount of selected clonal material, the importation of coffee propagating material should be restricted to seed which should be inspected, fumigated if necessary, and surface sterilized with a mercuric fungicide before being planted. The clonal material mentioned above may be imported into the Region only after being grown in an intermediate quarantine station, recognised for this purpose by the Standing Technical Sub-Committee referred to later in this Report.

Potato. Seed potato may be imported only if certified by the phytosanitary service of the exporting country that it was produced in areas within that country, where black wart (Synchytrium endobioticum), ring rot (Corynebacterium sepedonicum) and golden nematode (Heterodera rostochiensis) have not been known to occur and which are separated from areas infested by these diseases by a radial distance of not less than 2 kilometers. Other measures recommended by the first meeting of the Committee with respect to the importation of potatoes should also be observed.

Citrus. The requirement regarding the freedom of plants, rooted cuttings and budwood from diseases should include freedom from virus diseases.

## Protective Measures for Additional Crops

Suggestions for recommending measures for the control of the movement of some plants which were not covered by the first meeting of the Committee, for example, coconut, ground nut, pineapple and oil palms, were duly considered, but it was agreed that with the exception of coconut, it would be desirable to collect and examine further information relating to specific pests and diseases affecting those crops before appropriate quarantine measures might be suggested. On the other hand, in recognition of the growing possibility with regard to the movement of paddy seed, it was considered essential for the Committee to reaffirm the risk involved.

Coconut. The import of all planting material from countries, within or without the Region, where diseases of possible virus origin, such as kadang-kadang, have been known to occur, should be prohibited, except such materials as may be required for scientific purposes, in which case the fullest quarantine safeguards should be observed.

Rice. In view of the fact that at least four virus diseases of rice crop are known to occur outside the Region, apart from the varied distribution of diseases and some posts in countries within the Region, the imperative need for the fullest and most effective quarantine safeguards should be stressed to prevent the spread of those diseases and pests with the movement of paddy seed from one

territory to another. It was felt strongly that, rice being such an important crop, the chances of adding inadvertently to the species of injurious pests and diseases affecting this crop in this Region must be reduced to the minimum. The Committee hoped that plant breeders and other scientists concerned would not ignore the essential quarantine requirements when importing or exchanging paddy seed material.

#### Fumigation Methods

With a view to facilitating the determination of appropriate quarantine techniques for two important plant materials, the following undertakings were considered essential:

- (1) Suitable schedules for the atmospheric fumigation of sugar cane sets with some fumigants, such as methyl bromide, should be determined as speedily as possible.
- (2) The methods of fumigation of cotton seed and bales, in practice in different countries of the Region, should be critically examined.

## Plant Materials Moving in Air Traffic

Reiterating the recommendation of the first meeting of the Committee regarding quarantine requirements in respect of plants and plant products moving in international air traffic, it was recommended that:

- (1) Governments should expedite the enactment of legislation or the supplementing of the existing legislation, whenever necessary, so as to provide adequate safeguards for preventing the introduction of pests and diseases into their territories as a result of the importation of plant materials by air;
- (2) Full and sustained publicity should be given to the quarantine requirements of plant imports by air;
- (3) Steps should be taken to keep air passengers, exporters and importers of plant materials by air constantly informed of plant quarantine requirements and to require air passengers to declare plant materials carried by them:
- (4) In as much as governments may desire to facilitate air travel and transport and to grant concessions for customs purpose in the interest of international travel and trade, no relaxations or concessions in plant quarantine requirements should be permitted. This is because of the great risks involved in the national agricultural and forest resources by the introduction of even small amounts of plant material carrying diseases or pests.

## CONSIDERATION OF APPENDIX A OF THE AGREEMENT

The Committee examined the report of the Sub-Committee established to consider Appendix A of the regional Plant Protection Agreement (List of destructive pests and diseases not yet established in the Region) and, after introducing certain changes, approved the modifications recommended by the Sub-Committee. The revised list, as amended by the first and second meetings of the Committee, is included in this Report as Annex A.

#### Cacao

- (1) Under swollen shoot virus add after West Africa "(certain strains occur in Ceylon.)"
- (2) Under virus diseases of Trinidad, add "red mottle, vein clearing" as the common names of these diseases.

#### Citrus

- (1) Separate Anastropha ludens from other species of Anastropha.
  - (2) Add the following virus diseases:

Dwarf Japan

Stubborn disease California, Arizona

Vein enation California, South Africa, Australia

Xyloporosis Israel, Brazil, Texas, Florida

Tristeza

South America, South Africa,

Australia, West Africa, U.S.A.,

Israel. (Certain strains occur

in Ceylon and are suspected of

occurring in Java.)

## Coffce

Add the following disease :

Gibberella xylarioidos Tracheomycosis Africa

#### Cotton

Change the common names of "Anthonomus grandis" and Anthonomus spp. to "Mexican cotton boll weevil" and "boll weevils". respectively.

#### Hevea Rubber

Add the following insect :

Loptopharsa hevea Drake et Poor Lace bug Tropical America Maize

- (1) Under "Diatraea spp.", add "esp. D. saccharalis" and indicate that certain species occur in the Region.
  - (2) Add the following insect:

Sesamia cretica Stalk borer

Africa

#### Oil Palm

Add the following disease:

Cercospora elaeidis Stey. Freckle

Nigeria, Cameroons, Belgian Congo, Ivory Coast, Dahomey

#### Rice

- (1) Under Virus Rice dwarf, add the Phillipines to the known distribution.
  - (2) Amond the item Virus Cuba to read :

Virus

White leaf

Cuba, Venezuela. Panama, Florida

(3) Add the following nematode:

Aphelenchoides oryzae White tip

Japan

## Sugar Cane

- (1) Under <u>Diatraea</u> spp., add to the known distribution "(certain species occur within the Region.)".
  - (2) Add the virus disease, ratoon stunting.

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## Tapioca

- (1) Change the name of tapioca to cassava.
- (2) Add the following disease:

| `      | Phaeolus manihotis        | Root rot      | Madagascar  |
|--------|---------------------------|---------------|-------------|
| Papaya | (New host)                |               |             |
|        | Virus                     | Bunchy top    | Puerto Rico |
| Tung   | (New host)                |               |             |
|        | Septobasidium aleuritidis | Branch canker | Madagascar  |

#### TRAINING OF TECHNICAL PERSONNEL

In accordance with the recommendation of the first meeting of the Committee, FAO undertook to examine the possibility of organizing training centers on plant quarantine within the Region and a statement in this regard was submitted to the present meeting. The Committee noted that owing to the limitation of funds available for regional projects under its Expanded Technical Assistance Program, a plant quarantine training center could not be organized by FAO within the budgetary provisions of the next two years. It was noted, however, FAO provides each year a considerable number of fellowships which, upon the requests of governments, may be used for the training of technical personnel in the field of plant quarantine. Furthermore, there are other training facilities available, such as the practical course in crop protection offered by the Government of the United Kingdom to technical persons of countries participating in the Colombo Plan, and the short course in plant quarantine and plant protection organized at New York by the U.S. Department of Agriculture for inspectors of other countries.

The Committee considered that the special courses available in the United Kingdom and the United States, while valuable for the purposes for which they were designed, would not fully meet the needs of countries in the Region. The same applied to the opportunities for studying plant quarantine principles and methods in Australia and India.

After delegates and observers having described the training methods being employed and the professional levels of quarantine staffs in their respective countries, the Committee observed that in general there was a need for two categories of quarantine staff: (1) those with a good educational background who with special training would become fully qualified to do most of the routine inspections; (2) those with a higher standard of education, such as obtained from a University degree course in biological science, who by special advanced training in plant quarantine could assume broader responsibilities and direct other staff members in quarantine methods and practice and probably could also identify posts and diseases intercepted in quarantine. In some countries a third group of specialists with post-graduate training was needed for supervision of quarantine activities.

The Committee recognised that the standard of education and training of plant quarantine staff in each country would usually be related to facilities locally available and to standards ruling in other relative spheres of public service, but emphasised the necessity for each country in the Region to provide or secure the highest standard of training practicable for all officers in the plant quarantine service.

## PROGRAM OF THE COMMITTEE FOR 1958/59

With the object of maintaining and extending the effectiveness of regional plant quarantine activities in the period between meeting of the Committee, and in order to focus attention upon the most important and urgent of the activities during the early years of operation of the regional Plant Protection Agreement, the Committee decided to maintain the Standing Technical Sub-Committee set up by the first meeting and the following representatives of participating governments have been designated as its members.

K.B. Lal (India)
J.W.L. Peiris (Ceylon)
Kahn Jalavicharana (Thailand)
Nguyen-Van-Dam (Vietnam)
G. Bouriquet (France)
A. Johnston (Malaya)

The Chairman of the Committee is to act as the Chairman of the Technical Standing Sub-Committee and the FAO Regional Plant Protection Officer as the secretary.

The functions of the Technical Standing Sub-Committee include the following:

- (1) Review the outbreaks and spread of important plant diseases and pests outside the Region, with view of suggesting to participating governments effective methods for preventing their introduction into the Region.
- (2) Review plant quarantine legislation of participating governments and make suggestions towards the achievement of uniform plant quarantine action where such is necessary for efficiently protecting the crop production of the Region.
- (3) Circulate to members of the Committee and other technical experts of participating governments information concerning current research on plant diseases and pests of regional importance and any current literature on this subject.
- (4) Survey recruiting methods, training facilities and relative professional status with regard to plant quarantine officers within the Region.

- (5) Prepare lists of major diseases and pests affecting crops of regional importance, with notes on the following:
  - Geographic distribution :

Methods of transmission and spread ;

(c) Type of injury and importance :

(d) Effective quarantine methods against their spread; (e) Important literature.

Important literature.

- (6) Propare lists of major weeds in countries in the Region, with notes on :

(a) Main crops affected and reasons why so regarded;(b) Methods of spread within a country and of distrib Methods of spread within a country and of distribution within the Region ;

(c) Control measures being employed or suggested;

- (d) Possible quarantine measures with special reference to facilities and personnel available for seed examination and testing.
- (7) Establish an information service covering :
  - (a) Major outbreaks of diseases and pests already established in the Region ;
  - (b) Recent introductions and new records in each country ;
  - (c) Changes in plant quarantine legislation in each country; (d) Important changes in plant protection organisation and personnel.

In this connection, it is requested that participating governments send regular quarterly reports to the FAO Regional Plant Protoction Officer who will collate and circulate the information. In the case that a serious plant disease or pest is discovered in a country proviously free, such information should be transmitted immediately to the FAO Regional Plant Protection Officer for circulation.

- (8) Compile lists of experts within or available to the Region who may assist in identification of specific groups of insects, plant pathogens and weeds. Arrangement is to be made for transmission of diseased materials, insects, or weeds for identification without conflicting with plant quarantine requirements of the receiving country.
- (9). Make arrangements for intermediate quarantine facilities for such propagating materials for crops of major regional importance as participating governments may desire to import and require assistance.
- (10)Gather information on fumigation techniques in respect of various plants and plant products.

#### GENERAL RECOMMENDATIONS

(Recommendations regarding regulatory measures required in plant quarantine enforcement are summarized under the heading of "Measures for Regulating Importation and Movements of Plants")

#### 1. The Committee,

Considering the regional approach advocated and adopted by the Director-General of FAO as a sound and effective policy in promoting international cooperation in the field of plant protection,

Urging all governments in the Region to lend full support to FAO's efforts in this connection,

Recommends that the Director-General of FAO give consideration to extend such activities to other regions where regional plant protection organisations have not yet been established but are urgently needed, and that the Director-General refer all general plant protection problems requiring regional cooperation, that come to his attention, to the existing regional plant protection organisations for consideration to avoid duplication in efforts.

#### 2. The Committee,

Recognizing that adequate staffing by properly trained personnel is a prerequisite to efficient plant quarantine,

Considering that countries and territories in the Region urgently need adequate quarantine services,

Recommends that participating governments take appropriate steps to train sufficient personnel in plant quarantine to the requisite scientific standard, and that, to this end, participating governments, in the allocation of fellowships or scholarships available from FAO, the Colombo Plan or the U.S. International Coperation Administration, give a high degree of priority to candidates qualified to take advantage of specialized training in plant quarantine.

## 3. The Committee,

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Having reviewed the lists of weeds submitted by the delegates and observers of some governments,

considering that information available was inadequate with regard to : (a) injurious effects on crops, (b) distribution within

the region and (c) methods of spread within countries, and (d) possible quarantine measures to prevent their spread including reference to facilities available for seed examination and testing.

Recommends that participating governments, through their appropriate expert services, examine the complex question involved and submit full information to the next meeting of the Committee.

#### 4. The Committee,

Recognizing the need for reducing to a minimum the risk of introducing into the Region plant diseases and pests which may or may not be serious in other parts of the world,

Recommends that participating governments, before importing propagating material from countries outside the Region should examine first the possibility of obtaining suitable materials within the Region, and that participating governments, on receiving applications for propagating material from other countries within the Region, should use their best endeavours to meet such requests.

#### 5. The Committee.

Having examined the question of losses caused in food and subsistence crops by animals, mainly small vertebrates such as grain eating birds and invertebrates such as snails, in various parts of the world.

Recognizing the need for gathering the necessary information to enable suitable recommendations to be made on measures necessary to prevent the introduction into the Region and spread within the Region of these pests.

Recommends that participating governments submit to the next meeting of the Committee the information available to them with regard to animals other than insects, mites and nematodes broadly recognized as agricultural pests.

## 6. The Committee,

Referring to Article II of the regional Plant Protection Agreement with regard to the convening of meetings of the Committee,

Recommends that the Director-General of FAO, in consultation with the Chairman of the Committee, convene the third meeting of the Committee in 1959.

#### ANNEX A

List of Destructive Pests and Diseases not yet Established in the South East Asia and Pacific Region (Appendix A of the Agreement), as Amended by the First and Second Meetings of the Committee

## CACAO (Theobroma cacao)

|  |                           | Known Distribution                                  |
|--|---------------------------|---|
| Sahlbergella singularis Hagl.                | Capsid                    | West Africa, Belgian<br>Congo                       |
| Distantiella theobroma Dist.                 | Capsid                    | West Africa, Belgian<br>Congo                       |
| Helopeltis bergrothi Reut.                   | Capsid (Mosquito bug)     | West Africa   |
| Marasmius perniciosus Stahel                 | Witches! broom            | West Indies, South America                          |
| Monilia roreri Cif.                          | Monilia pod rot           | South America                                       |
| Trachysphaera fructigena<br>Tabor et Bunting | Trachysphaera pod rot     | Africa  |
| Swollen shoot virus complex                  | Swollen shoot             | West Africa (certain<br>strains occur in<br>Ceylon) |
| Viruses                                      | Red mottle, vein clearing | Trinidad  |

## CASSAVA (Manihot esculenta)

| Phaeolus manihotis Heim | Root rot     | Madagascar                        |
|-------------------------|--------------|-----------------------------------|
| Virus                   | Brown streak | East Africa, Southern<br>Rhodesia |

Madagascar

## CITRUS (Citrus spp.)

Anastrepha ludens (Loew.) Mexican fruit fly Mexico

Anastrepha spp., other Fruit flies America (tropical and than A. ludens warm regions)

Ceratitis capitata (Wied.) Mediterranean Europe, Near East,

fruit fly Africa, W. Australia, Central and South America, Hawaii

Deuterophoma tracheiphila Mal secco Mediterranean region
Petri

Virus Dwarf Japan

Virus Stubborn disease California, Arizona

Virus Vein enation California, South
Africa, Australia

Virus Xyloporosis Israel, Brazil, Texas,

Florida

riorida

Virus Tristeza (quick South America, South decline) Africa, Australia,

West Africa, U.S.A.,
Israel
(Certain strains

occur in Ceylon and are suspected of occurring in Java)

## COCONUT (Cocos nucifera)

Pachymerus nucleorum (F.) (A Bruchid) New World

Theraptus sp. (A Coreid) East Africa, Zanzibar

Aphelencoides cocophilus Red ring disease West Indies (Cobb) Goodey

## COFFEE (Coffea spp.)

Africa

Pentatomid bug Antestia spp.

New World, Africa White coffee leaf Leucoptera caffeella

(Guer.) miner

East and West Africa A mealy bug Planococcus kenyae (Le Pelley)

Mexico, U.S.A., West Omphalia flavida American leaf spot Indies, Central and

Maubl, et Rangel South America

Africa Trachysphaera fruit Trachysphaera fructigena

Tabor et Bunting

Gibberella xylarioides
(Stey.) Heim et Saccas Africa Tracheomycosis

## COTTON (Gossypium spp.)

West Indies, Mexico, Mexican cotton Anthonomous grandis Boh Central America, boll weevil Venezuela, U.S.A.

New World Boll weevils Anthonomous spp.

Phymatotrichum omnivorum Texas root rot Mexico, U.S.A.

(Shear) Duggar

Leaf curl Africa Virus

## HEVEA RUBBER (Hevea brasiliensis)

Leptopharsa heveae Drake et Poor Lace bug

Mexico, Central America, South American Dothidella ulei P. Henn. Trinidad, South America leaf blight

Central and South America Pellicularia filamentosa Target leaf spot (Pat.) Rogers

## MAIZE (Zea mays)

Diatraea spp. esp. D. Saccharalis (F.) Stalk borers

Southern U.S.A., Mexico, West Indies, Central America, South America (Certain species occur

in the Region)

Sesamia cretica Lederer Stalk borer

Africa

## OIL PALM (Elaeis guineensis)

Pachymerus lacerdae (Chevr.) (A Bruchid)

Nigeria

Pachymerus nucleorum (F.) (A Bruchid)

New World

Pimelephila ghesquerii Tams.

(A Pyralid)

West Africa

Fusarium oxysporum Schlect. Fusarium wilt

West Africa

Ceroospora elaedis Stey. Freckle

Nigeria, Cameroons, Belgian Congo, Ivory

Coast, Dahomey

## PAPAYA (Carica papaya)

Virus

Bunchy top

Florida, West Indies (Suspected in Ceylon)

## POTATO (Solanum tuberosum)

Leptinotarsa decemlineata Say.

Colorado beetle

New World, Europe

Corynebacterium sepedonicum (Spieck. et Kotth.)

rot

Bacterial ring New World, Europe

Skapt et Burk.

Synchytrium endobioticum (Schilb.) Perc. Black wart

Africa, Europe, South America

Heterodera rostochiensis Wr. Golden nematode

Europe, South America. U.S.A. (Long Island) (Annex A cont.)

RICE (Oryza sativa)

Stem or stalk borers Diatraea spp.

Southern U.S.A.,

Mexico, West Indies, Central America,

South America

Ephelis pallida Pat. Panicle disease

Sierra Leone

Virus

Rice dwarf

Japan, the Philippines

Virus

Rice stripe

Japan

Virus

White leaf

Cuba, Venezuela, Panama, Florida

Japan. U.S.A.

Aphelenchoides oryzae White tip

Yokoo

SUGAR CANE (Saccharum spp.)

Diatraea spp., esp. Stalk borers D. saccharalis (F.)

Southern U.S.A., Mexico, West Indies, Central America,

South America (Certain species occur in the Region)

Virus

Ratoon stunting

Australia, South Africa, Hawaii, Mexico, West Indies, Puerto Rico, U.S.A.

(Louisiana and Florida)

SWEET POTATO (Ipomaea batatas)

Virus

Internal cork

U.S.A.

Virus

Mottle

Africa (reported to occur in Ceylon)

Virus

Dwarf

Ryukyu Islands

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## TOBACCO (Nicotiana spp.)

Pseudonomas tabaci (Wolf Wildfire et Foster) Stevens

America, Africa, Europe, Japan

## TOMATO (Lycopersicum esculentum)

Virus

Spotted wilt

Africa, Australia, Europe, America

## TUNG (Aleurites fordii)

Septobasidium aleuritidis Branch canker (Heim et Bour.)

Madagascar

#### ANNEX B

## List of Plant Diseases and Pests and Weeds Submitted by Participating Governments

#### Australia

- 1. List of some diseases and pests present in the Territory of Papua and New Guinea but not universal throughout the Region.
- 2. List of some diseases and pests present in the region but not yet in Papua and New Guinea.

#### Ceylon

- 1. The more important diseases of Ceylon plants.
- Some major pests of crops of major economic importance in Ceylon.
- 3. Common obnoxious weeds of Ceylon.

#### France

- 1. Catalogue des parasites végétaux des plantes cultivées en Nouvelle-Calédonie.
- 2. Liste des parasites animaux et végétaux des plantes cultivées en Polynésie Française.

#### India

- 1. Important weeds of India.
- 2. Pests and diseases of agricultural importance in India.

#### Indonesia

- 1. A host list with notes on feeding habits of some agricultural insect pests found in Indonesia.
- 2. List of some diseases of plants found in Indonesia.
- 3. List of some noxious weeds in Indonesia.

## Netherlands

Some pests of economic crops in Netherlands New Guinea.

#### Malaya

Preliminary list of noxious weeds.

#### Thailand

- 1. List of weeds in Thailand.
- 2. Plant diseases recorded in Thailand.
- 3. Insect pests of Thailand (submitted at the First Meeting of the Committee).

#### Vietnam

Insect diseases and important noxious weeds in Vietnam.

#### United Kingdom

Tentative list of the more important plant pests and diseases in Sarawak.

